APPENDIX

2. On a host instantiating at least one copy of a managed characteristic application, a program control device responsive to signals ordering start up of an additional copy of the managed characteristic application or configuration, or shutdown of the least one copy of the managed characteristic application responsive to first information regarding performance and status of all applications including copies of the managed characteristic application and second information regarding performance of the host.

3. The program control device as recited in claim 2, wherein the managed characteristic application comprises a scalable application.

4. The program control device as recited in claim 2, wherein the managed characteristic application comprises a fault tolerant application, where the degree of fault tolerance is selectable by a user.

5. The program control device as recited in claim 2, wherein the managed characteristic application comprises a selectable priority application.

6. The program control device as recited in claim 2, wherein the managed characteristic application further responds to user-initiated control actions.

7. The program control device as recited in claim 2, wherein the program control device modifies the configuration of the managed characteristic application responsive to instantaneous tasking by a user.

8. In a distributed environment comprised of hosts instantiating copies of a managed characteristic application, a program control device responsive to signals ordering start up, configuration, shutdown or a move of a selected one of the managed characteristic applications responsive to first information regarding performance and status of all running applications including the managed characteristic applications, second information regarding performance of the hosts, and third information regarding performance of the distributed environment.

9. The program control device as recited in claim 8, wherein the managed characteristic application comprises a scalable application.

10. The program control device as recited in claim 8, wherein the managed characteristic application comprises a fault tolerant application, where the degree of fault tolerance is selectable by a user.

11. The program control device as recited in claim 8, wherein the managed characteristic application comprises a selectable priority application.

12. The program control device as recited in claim 8, wherein the managed characteristic application further responds to user-initiated control actions.

13. The program control device as recited in claim 8, wherein the program control device modifies the configuration of the managed characteristic application responsive to instantaneous tasking by a user.

14. In a grid system comprised of N hosts instantiating M managed characteristic applications, program control software instantiated by at least the N hosts, comprising:

N program control agents residing on a respective one of the N hosts and providing direct control over startup, configuration, and shutdown of applications on the respective one of the N hosts; and

a program controller operatively coupled to the N program control agents which receives one of interactive and automatic application control requests and generates specific control orders which are sent to the individual N program control agents responsive thereto,

where N and M are positive integers.

15. The program control software as recited in claim 14, wherein the specific control orders include one of startup orders permitting instantiation of an (M+1)th managed characteristic application or shutdown and configuration orders permitting a status change regarding one of the M managed characteristic applications.

16. The program control software as recited in claim 14, further comprising:

K program control displays permitting interactive control of distributed applications,

where K is a positive integer.

17. The program control software as recited in claim 16, wherein the K program control displays depict current status and the configuration of the M managed characteristic applications.

18. The program control software as recited in claim 16, wherein the K program control displays depict current status of all applications instantiated on the grid system.

19. The program control software as recited in claim 16, wherein each of the K program control displays comprises a graphical user interface (GUI) permitting a user to determine the status of each of the K program control agents and the program controller.

20. The program control software as recited in claim 16, wherein the K program control displays respond to L configuration files, wherein L is a positive integer.

21. The program control software as recited in claim 20, each of the K program control displays permits a user to one of create new configuration files and edit an existing one of the L configuration files.

22. The program control software as recited in claim 20, wherein selected ones of the L configuration files correspond to predefined scenario configurations.

23. The program control software as recited in claim 14, wherein the specific control orders permit a subset of the M managed characteristic applications to be one of stated and stopped.

24. The program control software as recited in claim 23, wherein all of the M managed characteristic applications in the subset are one of started and stopped simultaneously.

25. The program control software as recited in claim 23, wherein the M managed characteristic applications in the subset are one of started and stopped in a predetermined sequence.

26. The program control software as recited in claim 23, wherein all of the M managed characteristic applications in the subset are one of started and stopped in a predetermined sequence having a respective delay time between each event in the predetermined sequence.

27. The program control software as recited in claim 23, wherein first ones of the M managed characteristic applications comprise scalable applications and second ones of the M managed characteristic applications comprise fault tolerant applications, where the degree of fault tolerance is selectable by a user.

28. The program control software as recited in claim 23, wherein first ones of the M managed characteristic applications comprise selectable priority applications and second ones of the M managed characteristic applications comprise fault tolerant applications, where the degree of fault tolerance is selectable by a user.

29. The program control software as recited in claim 23, wherein first ones of the M managed characteristic applications comprise scalable applications, second ones of the M managed characteristic applications comprise fault tolerant applications, where the degree of fault tolerance is selectable by a user, and third ones of the M managed characteristic applications comprises selectable priority applications.

30. The program control software as recited in claim 14, wherein the M managed characteristic applications comprise scalable applications.

31. The program control software as recited in claim 14, wherein the M managed characteristic applications comprise fault tolerant applications, where the degree of fault tolerance is selectable by a user.

32. The program control device as recited in claim 14, wherein the M managed characteristic applications comprises selectable priority applications.

33. The program control software as recited in claim 14, wherein:

each of the N hosts operates in accordance with a selected one of R operating systems;

the N program control agents implement the orders via system call mechanisms specific to the particular operating system of a corresponding one of the N hosts;

R is a positive integer; and

N is greater than or equal to R.

34. The program control software as recited in claim 14, wherein each of the N program control agents provides feedback to the program controller regarding the current status and configuration of all applications running on a respective one of the N hosts and host status for that one of the N hosts.

35. The program control software as recited in claim 14, further comprising:

K program control displays permitting interactive control of distributed applications, wherein:

each of the K program control displays comprises a graphical user interface (GUI) permitting a user to determine the status of each of the N program control agents and the program control function;

each of the K program control displays responds to a respective subset of L configuration files, wherein K and L are positive integers; and

the program controller, using information from specification files different than the L configuration files generates the specific control orders by translating the control function requests into the specific control orders.

36. In a distributed environment comprised of N hosts instantiating M managed characteristic applications, program control software instantiated by at least the N hosts, comprising:

N program control agents residing on a respective one of the N hosts and providing direct control over startup, configuration, and shutdown of applications on the respective one of the N hosts;

a program controller operatively coupled to the N program control agents, which receives one of user-initiated and program initiated application control requests and information comprising first information regarding performance and status of all running applications, including the managed characteristic applications, second information regarding performance of the hosts, and third information regarding performance of the distributed environment, and which generates specific

control orders which are sent to the individual N program control agents responsive thereto; and

K program control displays permitting generation of the user-initiated application control requests applied to the program controller,

wherein:

each of the K program control displays instantiates a graphical user interface (GUI) permitting a user to determine the status of each of the N program control agents and the program control function;

each of the K program control displays responds to a respective subset of L configuration files;

the program controller, using information from specification files different than the L configuration files generates the specific control orders by translating the control function requests into the specific control orders; and

K, L, M and N are all positive integers.

37. The program control software as recited in claim 36, wherein the specific control orders include one of startup orders permitting instantiation of an (M+1)th managed characteristic application or shutdown, and configuration orders permitting a status change regarding one of the M managed characteristic applications.

38. The program control software as recited in claim 36, wherein:

each of the N hosts operates in accordance with a selected one of R operating systems;

the N program control agents implement the orders via system call mechanisms specific to the particular operating system of a corresponding one of the N hosts;

R is a positive integer; and

N is greater than or equal to R.

39. Software stored on at least one host for converting N networked hosts into a resource managed system instantiating M managed characteristic applications, comprising:

a first function group which monitors the host and network resources

a second function group which provides general-purpose application event reporting and event correlation capabilities;

a third function group which provides the reasoning and decision-making capabilities for the Resource managed system; and

a fourth function group which provides program control capabilities permitting starting, stopping, and configuring of selected ones of the M managed characteristic applications on respective ones of the N hosts in the resource managed system, the fourth function group further comprising:

N program control agents residing on a respective one of the N hosts and providing direct control over startup, configuration, and shutdown of the selected ones of the M managed characteristic applications on the respective one of the N hosts; and

a program controller operatively coupled to the N program control agents which receives one of interactive and automatic application control requests and generates specific control orders which are sent to the individual N program control agents responsive thereto,

wherein the automatic application control request is generated by the third function group.

40. The software as recited in claim 39, wherein the specific control orders include one of startup, shutdown, and configuration orders.

41. The software as recited in claim 39, wherein the fourth function group further comprises:

K program control displays permitting interactive control of the M managed characteristic applications.

42. The software as recited in claim 41, wherein each of the K program control displays comprises a graphical user interface (GUI) permitting a user to determine the status of each of the N program control agents and the program controller.

43. The software as recited in claim 41, wherein the K program control displays respond to L configuration files, wherein L and K are positive integers.

44. The software as recited in claim 43, each of the K program control displays permits a user to one of create a new configuration file and edit an existing one of the L configuration files.

45. The software as recited in claim 43, wherein selected ones of the L configuration files correspond to predefined scenario configurations.

46. The software as recited in claim 39, wherein:

each of the N hosts operates in accordance with a selected one of R operating systems;

the N program control agents implement the orders via system call mechanisms specific to the particular operating system of a corresponding one of the N hosts; and

N and R are positive integers and N is greater than or equal to R.

47. The software as recited in claim 39, wherein each of the N program control agents provides feedback to the program controller regarding the current status and configuration of all applications running on a respective one of the N hosts.

48. The software as recited in claim 39, wherein the fourth function group further comprises:

K program control displays permitting interactive control of distributed applications, wherein:

each of the K program control displays comprises a graphical user interface (GUI) permitting a user to determine the status of each of the N program control agents and the program controller;

each of the K program control displays responds to a subset of L configuration files, wherein L and K are positive integers; and

the program controller, using information from specification files different than the L configuration files generates the specific control orders by translating the control function requests into the specific control orders.